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# Teaching About Health Care Disparities in the Clinical Setting

Susan B. Glick, MD<sup>1</sup>, Leonor Fernandez, MD<sup>2</sup>, David M. Irby, PhD<sup>3,4</sup>, Elizabeth Harleman, MD<sup>3</sup>, and Alicia Fernandez, MD<sup>3</sup>

<sup>1</sup>Section of General Internal Medicine, Department of Medicine, University of Chicago, Chicago, IL, USA; <sup>2</sup>Division of General Medicine and Primary Care, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Cambridge, MA, USA; <sup>3</sup>Department of Medicine, University of California, San Francisco, CA, USA; <sup>4</sup>The Carnegie Foundation for the Advancement of Teaching, Stanford, CA, USA.

Clinical teachers often observe interactions that may contribute to health care disparities, yet may hesitate to teach about them. A pedagogical model could help faculty structure teaching about health care disparities in the clinical setting, but to our knowledge, none have been adapted for this purpose. In this paper, we adapt an established model, Time-Effective Strategies for Teaching (TEST), to the teaching of health care disparities. We use several case scenarios to illustrate the core components of the model: diagnose the learner, teach rapidly to the learner's need, and provide feedback. The TEST model is straightforward, easy to use, and enables the incorporation of teaching about health care disparities into routine clinical teaching.

**KEY WORDS:** teaching; disparities; clinical; time-effective; TEST.

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## INTRODUCTION

Though the majority of US physicians have seen a patient receive poor quality health care due to patient race or ethnicity, responding to these witnessed practices can be challenging.<sup>1</sup> Many faculty may be uncertain about the link between an observed behavior and clinical outcomes.<sup>1–5</sup> Faculty often avoid giving feedback about behaviors or attitudes that suggest a lack of professionalism and this tendency may be heightened when discussing health care disparities, an emotionally charged subject.<sup>6,7</sup> Emotional reactions, such as shame or anger in teacher and learner, may limit teaching effectiveness. Finally, time constraints alone may cause teachers to choose to avoid a perceived Pandora's box.

We believe a pedagogical model is needed to facilitate teaching about health care disparities in the clinical setting. The model should be easily remembered, applicable to teaching in both the inpatient and outpatient settings, and responsive to time-limited environments. While many models have been developed to help clinical educators teach effectively and efficiently, to our knowledge none have been applied to teaching about health disparities. In this paper, we apply the Time-Effective Strategies for Teaching (TEST) model to teaching about health care disparities.<sup>8</sup> The TEST model recommends

teachers diagnose the learner's instructional need, then teach rapidly to that need and provide feedback. To demonstrate the application of this model to teaching about health care disparities, we present four clinical scenarios that illustrate common attitudes and behaviors associated with provider-driven health care disparities (Table 1). We use each of the first three scenarios to illustrate one aspect of the TEST model: diagnose the learner, teach rapidly, and provide feedback; the fourth scenario illustrates the integration of the three components of the model. While each of the clinical scenarios offers many teaching opportunities, we select one instructive example. Our goal is to create a framework for teaching about health care disparities that is readily incorporated into clinical teaching rather than to explore root causes of clinician behavior or health care disparities.

## SELECTING THE TOPIC FOR INSTRUCTION/ DIAGNOSE THE LEARNER

A Spanish-speaking woman with limited English proficiency is transferred to your team from the ICU following treatment of fulminant hepatic failure due to acetaminophen overdose. The resident presents a limited history, obtained with the patient's husband as interpreter. You ask the team to call the hospital's interpreter. The team responds, "We'll take care of that tomorrow; we're short on time today."

Up until this point, you have been impressed with your team. They seem bright and dedicated. In this situation, however, they are cutting corners at the expense of patient care. How can you effectively respond?

To teach effectively in this setting, one must first identify the learner's needs, then target teaching to those needs.<sup>8</sup> Identifying the learner's needs is known as "diagnosing" the learner. Learners may possess gaps in knowledge, attitudes and/or skills. (Table 1 provides an illustrative list.) In addition, adverse circumstances — the context of clinical care — may challenge learners and contribute to provider-driven health care disparities; these circumstances provide important teaching opportunities. Addressing the context of care allows learners to understand that processes of care contribute to provider

Table 1. Illustrative Differential Diagnosis of Learner's Need Related to the Four Cases

Sample case	Knowledge gap	Inadequate skills	Attitude barriers	Adverse circumstances
Case 1. Failure to use professional interpreter for patient with limited English proficiency	<ol style="list-style-type: none"> <li>1. Lack of knowledge about disparities associated with language barriers</li> <li>2. Unaware of error rate associated with ad hoc interpreters</li> <li>3. Unaware of confidentiality issues associated with ad hoc interpreters</li> </ol>	<ol style="list-style-type: none"> <li>1. Uncertain how to access interpreters</li> <li>2. Uncertain how best to interview a patient using an interpreter</li> <li>3. Feels skilled using an interpreter in person, but not by telephone (or vice versa)</li> <li>4. Overestimates patient comprehension of English</li> <li>5. Misjudges own ability to speak a language other than English</li> </ol>	<ol style="list-style-type: none"> <li>1. Frustration with the amount of time required to interview a patient with an interpreter</li> <li>2. Belief that all those living in the US should speak English</li> <li>3. Reluctance to provide care to undocumented immigrants</li> <li>4. Concern about embarrassing patient/family member by suggesting an interpreter is needed</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of on-site interpreters</li> <li>2. Lack of bedside telephones for interpretation, especially in the ER and ICU</li> <li>3. Lack of funding for telephone interpreters</li> <li>4. Insufficient time</li> </ol>
Case 2. Too readily accepts patient refusal of indicated procedure	<ol style="list-style-type: none"> <li>1. Lack of knowledge about knee replacement</li> <li>2. Unfamiliar with the evidence for disparities in knee replacement</li> <li>3. Unaware of literature describing patient misconceptions of knee replacement</li> <li>4. Misunderstanding or misconception of the evidence about health care disparities</li> </ol>	<ol style="list-style-type: none"> <li>1. Does not know how to elicit patient beliefs or values</li> <li>2. Uncertain how to negotiate treatment plan with patient</li> </ol>	<ol style="list-style-type: none"> <li>1. Believes joint replacement is not beneficial</li> <li>2. Concerned that preoperative assessment will be too time consuming</li> <li>3. Overly concerned with moving on to next patient</li> </ol>	<ol style="list-style-type: none"> <li>1. Inability to schedule patients for frequent follow up due to limited outpatient clinic availability and large panel size</li> <li>2. Competing responsibilities during outpatient clinic session, including inpatient care</li> </ol>
Case 3. Mistaken assumption of substance abuse	<ol style="list-style-type: none"> <li>1. Unaware that biases and stereotypes may impact patients</li> <li>2. Limited differential diagnosis for poorly controlled asthma</li> <li>3. Lack of knowledge about appropriate treatment of asthma</li> </ol>	<ol style="list-style-type: none"> <li>1. Unsure how to assess asthma severity or control</li> <li>2. Uncertain how to assess patients' use of illicit substances</li> </ol>	<ol style="list-style-type: none"> <li>1. Unaware of own biases and stereotypes, though believes others may possess them</li> <li>2. Recognizes own biases/stereotypes but does not believe these affect patient care</li> </ol>	<ol style="list-style-type: none"> <li>1. Limited demographic diversity in learner's panel of patients</li> <li>2. Limited opportunity to reflect on patient</li> <li>3. Expected pace in ambulatory setting too rapid for learner's ability</li> </ol>
Case 4. Failure to diagnose low health literacy	<ol style="list-style-type: none"> <li>1. Unaware of prevalence of low health literacy</li> <li>2. Lack of knowledge about demographic groups most likely to experience low health literacy</li> </ol>	<ol style="list-style-type: none"> <li>1. Uncertain how to diagnose low health literacy</li> <li>2. Lack of familiarity with strategies to respond to patients with low health literacy including teach-back method</li> </ol>	<ol style="list-style-type: none"> <li>1. Frustrated by the consequences of low health literacy including poor adherence and frequent hospitalizations</li> <li>2. Disbelief that highly functioning individuals may experience poor health literacy</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of patient education materials written at the 5th grade level or below</li> <li>2. Lack of support staff for patient education</li> <li>3. Dependence on written material for patient education</li> </ol>

behavior and may lead to inequitable health care. Failing to diagnose the learner may cause the teacher to provide information that the learner already knows, while ignoring areas that are needed. For example, providing factual information to a learner in an attempt to improve her fund of knowledge will be ineffective if the learner already possesses adequate content knowledge, but lacks appropriate skills.

The Time-Effective Strategies for Teaching (TEST) model encourages teachers to identify learners' needs through probes or brief observation. Questions are used to assess the learner's experience with a particular clinical challenge as well as the ability to assess and manage it. We recommend the teacher ask a general question such as "What would you like to know about this issue?" Table 2 contains additional useful ques-

Table 2. Questions a Teacher Might Ask to Diagnose the Learner

Knowledge gap	Inadequate skills	Attitude barriers	Adverse circumstances
1. Tell me about the last time you took care of a patient with this particular problem	1. How often have you had an opportunity to use this particular skill?	1. How do you feel about taking care of a patient with this particular problem?	1. In what ways does our office/hospital make caring for a patient with this problem more difficult?
2. What do you think is going on with this patient? What led you to that conclusion?	2. The last time you used this skill, what went well? What didn't go as well?	2. What do you think led you to feel that way?	2. What would it take to prioritize this problem higher on your list?
3. What else do you think might have caused this patient's symptoms/diagnosis?	3. Have you observed this skill performed well? What made it successful?	3. How do you think the patient felt or perceived you?	
4. What sort of framework do you use when thinking about this problem?			
5. What do you know about this problem?			

tions. The purpose of this inquiry is not to diagnose all of the learner's needs, but rather to identify at least one area in which the learner would benefit from instruction.

Alternatively, a two-minute observation of the learner's interaction with the patient can also provide the teacher with valuable information about the learner's needs. Irby and Wilkerson recommend the learner and teacher meet beforehand to discuss the portion of the encounter to be observed, that the teacher slip quietly into the room to briefly observe the chosen interaction, leave the room without participating in the encounter, and later meet to discuss the observation.<sup>8</sup>

You say to the team, "How do you make the decision about whether to use family members as interpreters?"

Resident: "Well, if they are at the bedside, we tend to use them to save time."

Based on the resident's description that lack of time, a common adverse circumstance, motivated the decision to use an ad hoc interpreter, you decide to teach the team about the challenges associated with the use of family members as interpreters.<sup>9,10</sup> While waiting for the interpreter to arrive, you review that patients with limited English proficiency often experience more medical errors, and receive lower quality of care.<sup>11–18</sup> You ask the team to describe the ways that working with ad hoc interpreters could contribute, eliciting or presenting that unlike professional interpreters, ad hoc interpreters have not been trained to perform medical interpretation and are prone to errors in comprehension and translation.<sup>19</sup> Often relatives or friends of the patient, ad hoc interpreters may be reluctant to discuss personal or sensitive information with the patient; moreover, the patient may be unwilling to disclose this information through a family member or friend. Finally, relatives who serve as interpreters may experience substantial conflict between their roles as family members and as interpreters.<sup>10</sup> You note that clinicians should always inform patients of the availability of professional interpretation and refrain from using family members as interpreters unless both patient and family member wish otherwise.

Working with the hospital's interpreter, the resident inter-

views the patient and finds the patient and her husband are relieved to work with a professional interpreter. The more accurate history now obtained changes the working diagnosis from probable intentional overdose to accidental ingestion. Following the interview you ask the team to identify discrepancies in the histories obtained with the ad hoc and the professional interpreters.

TEACH RAPIDLY

A resident presents her patient, a 64-year-old African American man with advanced degenerative joint disease of the knees who has persistent pain despite maximal medical therapy. The resident asks about additional non-surgical options. She states she has discussed knee replacement surgery with the patient and "he doesn't want it." You inquire about the patient's concerns, but the resident repeats, "He just said he doesn't want it." You probe the learner to diagnose her learning need and find she is unfamiliar with disparities in joint replacement surgery (a knowledge gap) and does not know how to elicit a patient's concerns about surgery (a skill gap). How might you effectively and rapidly target teaching to this resident?

Teaching during clinical encounters presents numerous time challenges. Effective educators must adapt their teaching strategies to the rhythms of the work environment, selecting when to emphasize a point and when to omit or defer discussion. While many teaching strategies may be modified for use in time-limited settings, the TEST model encourages the use of established time-effective teaching strategies. For example, the One Minute Preceptor, also known as a five-step microskills model of clinical teaching, is specifically designed to help preceptors care for patients and teach learners both efficiently and effectively.<sup>20–23</sup> (See Table 3 for options for Time-Effective Strategies for Teaching.) The hallmark of this model is the teaching of general rules to address gaps in knowledge. The general rule is brief, applicable to the case under discussion, addresses the learner's needs, and highlights key principles that can be translated to the care of other patients.<sup>24</sup>

Table 3. Options for Time-Effective Strategies for Teaching

Diagnosis	Knowledge gap	Inadequate skills	Attitude barriers	Adverse circumstances
Potential Time-Effective Teaching Strategy	1. One Minute Preceptor (i.e., diagnose the learner, teach general rules, provide feedback)	1. Provide a demonstration, preferably with preview (before the demonstration), commentary (during the demonstration) and debriefing (following the demonstration)	1. Identify good work and praise it	1. Address situational difficulties while aligning with learner's desire for competence. Set expectations in advance that this will be difficult
	2. Activated demonstration (i.e., Ask the learner to observe the teacher perform a specific task. Following the observation, activate the learner by asking him to describe what was observed)	2. Provide guided practice with feedback	2. Distinguish cognitive short cut from bias	2. Introduce ABCs of root cause analysis [antecedents (what led up to the event?), behavior (what happened?) and consequences (what happened as a result?)]
	3. Assign a reading	3. Select cases that provide opportunity for independent practice	3. Provide corrective feedback	
		4. Identify key skills performed well and describe specifically what made them effective	4. Encourage reflection (e.g., with open ended probe or direct question)	

Teaching evidence-based general rules about health care disparities not only provides the learner with fundamental information, but also demonstrates that health care disparities may be approached similarly to other clinical issues and are amenable to discussion and inquiry based on evidence. For example, one might teach that total knee replacement surgery has been shown to improve function and decrease pain in patients with severe osteoarthritis of the knee; however, the rate of total knee replacement is 39% lower for black patients with arthritis than for white patients.<sup>25</sup> Black patients tend to experience more disability and knee pain prior to surgery than whites and may be more likely to believe they will experience a lengthy, painful recovery process.<sup>26,27</sup> Poor patient-physician communication about patient misconceptions may play an important role in patient refusal of procedures.

Bedside rounds are a time-efficient way to teach learners found to have gaps in skills. This setting enables role-modeling and observation of specific learner behaviors. Before heading to the bedside, the teacher reviews the goals of the session and to ensure active learning, provides a role for each team member.<sup>28</sup> The relevant history and examination can be split among team members. Alternatively, one team member can be tasked with interviewing and examining the patient and the others with observing specific behaviors, such as the techniques used to elicit patient concerns. Clarifying questions or confirmation of physical findings can follow the initial assessments. Debriefing the encounter may occur at the bedside with the patient's involvement or privately elsewhere. An activated demonstration at the bedside is a variation of this technique. In an activated demonstration, the teacher asks the learner to observe the teacher perform a specific task (e.g., "Watch the way I elicit the patient's concerns about knee replacement surgery and address them explicitly"). Afterward, the teacher "activates" the learner by asking him to describe and discuss his observations.

Given the rapid pace of clinic this afternoon, you decide to teach the resident general rules about disparities in joint replacement surgery and the importance of eliciting patient concerns when discussing a procedure. You

decide to defer teaching the resident specific skills to elicit patient concerns.

Attending: Patients may decline surgery for many reasons, so it is important to understand each patient's decision. It is helpful to know that rates of joint replacement surgery in the US vary by patient race, ethnicity, gender and geographic location.<sup>29,30</sup> As a group, African American patients are less likely to report understanding joint replacement surgery than white patients, and are more likely to believe they will experience a lengthy, painful post-operative course. As a more general rule, it is always important to explore the reasons that a given patient refuses a treatment and to understand and address his specific concerns. Why don't you go back and ask the patient what concerns he may have about the surgery and then we can discuss how to address them?

## GIVE FEEDBACK AND PROMOTE REFLECTION

A fourth-year medical student presents his patient, a 44-year-old African American man with frequent asthma exacerbations requiring emergency room care. When you ask why the asthma is not well controlled, the student states dismissively, "I don't know, probably crack." Your evaluation reveals a forthcoming patient with no history or physical stigmata of drug use whose asthma is treated with a short-acting beta-agonist alone. While talking with the patient about the need for inhaled corticosteroids, you find yourself becoming angry with the student and unsure how, or even if, you should discuss his remark with him.

Physicians often rely on pattern recognition to simplify decision making in clinical situations, particularly when



pressed for time, fatigued or overloaded with information.<sup>31,33</sup> While often useful, pattern recognition may involve stereotypes or cognitive shortcuts to obtain, process and recall information about others.<sup>33</sup> Cognitive shortcuts involving race, ethnicity or gender may contribute to health care disparities and prevent physicians from treating diverse patient populations effectively, particularly when these shortcuts are combined with bias, defined as unjustifiable negative beliefs about others.<sup>34</sup> Bias is often unconscious and may differ from consciously expressed views.<sup>32,35–37</sup> In the example above, the student equated inadequate asthma control in an African American patient with the use of inhaled cocaine. Though inhaled cocaine can exacerbate asthma, the cognitive shortcut prevented the student from thinking through other etiologies for the patient's poor asthma control. Bias may, or may not, have played a role in the student's remark. It is often neither possible nor necessarily desirable to attempt to establish the role of bias.<sup>38,39</sup> However, the student should be made aware of the shortcoming associated with his cognitive short cut and of the literature that shows physicians often underestimate asthma severity in African Americans, and are therefore less likely to prescribe appropriate therapy.<sup>40,41</sup> Physician behavior may contribute to the longstanding observation that African American patients with asthma are more likely to require visits to the Emergency Department and hospitalization for their illness than white patients.<sup>42–46</sup>

Feedback proves a useful strategy for addressing inappropriate stereotyping or bias. Feedback allows learners to gain insight into their performance so that it may be further modified and refined. It should be a regular and expected component of the education process. Feedback should be specific, focused, objective, and offered in a timely manner.<sup>28,47,48</sup> The context in which feedback is delivered should be considered carefully as feedback is most likely to be successfully incorporated when delivered in a direct, yet supportive, manner. Because situations with the potential to cause health care disparities are emotionally charged for both faculty and learners, teachers may benefit from a brief time out to organize their own thoughts and feelings before providing feedback.

Feedback may be used to promote reflection, especially when it is corrective and discordant with the learner's self-perception.<sup>49</sup> Reflection provides an opportunity for critical thinking and review.<sup>50</sup> Teachers stimulate reflection by asking learners to share their insights about a particular experience or articulate what they have learned. Adding additional probes such as "tell me more" encourages learners to engage in deeper reflection. Through reflection, learners explore the larger meaning of their actions and experiences, which leads to individual growth.<sup>51</sup> Reflection can be accomplished in a group setting or individually.

Attending: What led you to believe the patient's frequent asthma exacerbations were due to drug use?

Student: I guess he reminded me of so many other patients I've seen this year with asthma. A lot of them were using cocaine.

Attending: (Calmly giving feedback.) While cocaine use can certainly worsen asthma, many other etiologies are more likely in this patient who denies drug use and has no suggestion of drug use by history or physical

examination. There is literature showing that when doctors are busy and under stress, we take cognitive shortcuts. I know that I certainly do. These shortcuts or stereotypes can be useful, but they can also lead to disparities in care by affecting the way we interpret clinical information. In this case, the stereotype you used was not accurate or helpful and masked the real problem — failure to prescribe inhaled corticosteroids for inadequately controlled asthma. Next time, a more careful history will help us avoid jumping to conclusions.

#### Putting it all Together: The TEST Model and Health Care Disparities Education

On post-call rounds, your intern presents a 68-year-old white man with hypertension, hypercholesterolemia, and congestive heart failure with exacerbation who has required admission twice this month. The intern notes that once again, the CHF exacerbation is due to non-adherence. As the intern presents the case, his frustration is evident. You have several immediate concerns: determining the cause of the patient's non-adherence, figuring out how to target teaching to the intern, and addressing the intern's frustration.

You decide to perform a two-minute observation to simultaneously "diagnose" the patient and the intern. You explain to the intern that you would like to watch him assess the patient's use of medication.

Intern: Are you taking the lisinopril every day?

Patient: Is that the blue one or the white one? I take the blue pill every day.

Intern: The blue pill is the furosemide. You need to take the lisinopril every day.

You suspect the patient has low health literacy and diagnose the learner as unfamiliar with this problem and established skills to address it. Outside the room, you teach a general rule.

Attending: This situation is frustrating, isn't it? I suspect this patient has low health literacy. In the US, low health literacy is particularly common in older patients and in those with chronic disease, low socioeconomic status and low educational attainment.<sup>52</sup> In fact, two-thirds of adults age 60 and older have inadequate or marginal health literacy.<sup>53</sup> Patients with low health literacy often fail to understand medication instructions and are at increased risk for hospitalization.<sup>54,55</sup> Failing to recognize and respond effectively to patients with low health literacy is common and may lead to disparities in health care. The "teach-back" method is used to assess patients' understanding of medication instructions.<sup>56,57</sup> Have you had a chance to use this skill before?

Intern: I have heard about the teach-back method, but do not really know what it is.

Attending: (Initiating an activated demonstration.) When we return to the room, I would like you to pay attention to how I explain the medications to the patient and ask him to show me — teach me — how he will use them at home.

After the demonstration, the attending seeks to activate the intern by asking questions about his observations.

Attending: Tell me what you observed about the use of the teach-back method.

Intern: You used simple language to explain the purpose of the medications and how to use them and then you asked the patient to show you how he would take the medication at home. When he didn't get it quite right, you showed him again and then had him show you another time until he got it right.

Attending: (Giving feedback.) You just summarized the teach-back method for patients with low health literacy beautifully. (Promoting reflection.) How do you think the patient perceived us?

Intern: Well, I was pretty exasperated with this patient and I bet he knew it. I mean, I have spent hours taking care of him and then he goes home and is right back to square one again. After a while, it just seems so futile. I feel more optimistic at this point.

Attending: I'm glad to hear that. How do you think the patient feels now?

Intern: I think he feels more like we're on the same team instead of rivals. I know I do.

In this scenario, the attending selects a two-minute observation, to "diagnose" the patient and the learner. The attending learns the intern possesses gaps in both knowledge and skill. The attending teaches a general rule about low health literacy to strengthen the intern's knowledge base and then uses an activated demonstration to improve the intern's skill set. Finally, brief feedback and an invitation to reflect on the patient's perspective allow the intern to give voice to his emotions and recognize that he has entered a partnership with the patient.

## CONCLUSION

In this paper, we adapted an established teaching model, Time-Effective Strategies for Teaching, to the teaching of health care disparities at the bedside. The TEST model, which recommends teachers diagnose the learner, teach rapidly and provide feedback, offers a straightforward, structured framework for teaching in clinical situations with the potential to result in health care disparities. Evidence-based teaching about health care disparities can and should be readily incorporated into routine clinical care.

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**Corresponding Author:** Susan B. Glick, MD; Section of General Internal Medicine, Department of Medicine, University of Chicago, 5841 S Maryland Ave., MC 2007, Chicago, IL 60637, USA (e-mail: sglick@uchicago.edu).

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